

UNITED STATES DEPARTMENT OF AGRICULTURE

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County Land Use Planning  
Work Outline Number 1  
Covering an  
Area Mapping and Classification Project  
Recommended for  
County Agricultural Land Use Planning Committees

Prepared by  
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Land Use Mapping and Classification  
recommended for  
County Agricultural Planning Committees

PREFACE

This work outline represents a more detailed statement of the land use mapping and classification work being recommended by the Department for inclusion in the county agricultural planning program in each State. It is an elaboration of the first part of the Department's statement of August 24, 1938, entitled, "Summary of Proposals for County Agricultural Land Use Planning, 1938-39," and is designed primarily for use by the state advisory committees, the project leaders, the planning technicians and others interested in the details of the work. It is believed that this work outline, unless it is materially revised and simplified, is not suitable for transmission to county agricultural planning committees, and therefore should be used mainly as a guide in formulating the detailed work plans for the State and in leading the project as it is carried out in the counties.

I. GENERAL

A. Need for Land Use Mapping and Classification Work.

The Department of Agriculture and the States have an intense interest in the land use planning activities of county agricultural planning committees, particularly in those lines of work which enable the local people to participate in public programs designed to aid in securing better rural land use and a more stabilized, balanced agriculture. To accomplish their objectives and to be of genuine assistance in improving the rural economy, the several public programs must be applied in the field, with due consideration given to the particular needs, characteristics, and land use problems of each community. The programs also must be so correlated that the work of one agency does not off-set or destroy the desirable land use adjustments accomplished by the programs of other agencies, and above all, there must be an effective balance between programs to assure that the relative emphasis placed upon the various lines of public action is in keeping with the public needs. Too much emphasis upon conservation at the expense of present living standards is as undesirable from a long-time point of view as is the wasteful use of land resources. There must be a balance between use and conservation, and the people must decide where the balance will be established.

Areas suitable for farming must be identified and Federal and State agencies need to work out with farmers the long-time goals for each local farming area so that: (a) Through educational procedures AAA



committees will be able to accomplish more with available funds by concentrating expenditures on the most desirable practices, and on areas where the need for land use adjustments is greatest, (b) the Soil Conservation Districts may develop their program, and the Soil Conservation Service its demonstration areas and other soil conservation work with the best available knowledge of erosion control techniques and their possible effects upon farm income, (c) the Soil Conservation Service, the Forest Service, and the Bureau of Agricultural Economics may develop the flood control and water facilities programs with due regard to their effects upon farm income, (d) the Farm Security Administration, as well as individuals, may be warned against setting up farm units too small or otherwise unsuited to the areas in which they are established, (e) the Farm Security Administration may grant rehabilitation loans and farm tenant purchase loans on the condition that farmers make the type of adjustments appropriate for the areas in which their farms are located, (f) the Extension Service and its specialists may formulate extension programs on the basis of adjustments agreed upon, and with greater emphasis upon the synthesis of the work of the specialists in terms of the fundamental or real problems, (g) the Forest Service may be guided in carrying out its farm-forestry program, and (h) the State and Federal research and experimental programs may be more closely integrated better, and oriented to particular local farming problems.

Land Use Mapping and Classification serves to supply public programs with needed information on the location and characteristics of areas unsuited to farming. The Bureau of Public Roads wishes to know where these areas are in order that it may plan its secondary highway system more intelligently. It does not want to build expensive structures and thereby encourage settlement in areas that cannot in the long run support farming. The Bureau of Agricultural Economics needs to know where these areas are so as to help guide its public program of land purchase and land use adjustment projects. The AAA does not want to use funds as a means of sustaining agriculture in areas destined to revert to other uses. The Soil Conservation Service does not wish to work out detailed farm management plans for controlling erosion where farming should be discouraged. The Farm Security Administration does not wish to use its powers as a means of encouraging farming in areas unsuited to farming. None of these agencies can administer their programs most effectively until agreement is reached concerning the location and character of land that is unsuited to farming. States and counties may frequently find it cheaper in the long run to move people from poor land areas to better lands than to continue supplying roads and schools at high cost. Counties may wish to discourage settlement in such areas by enacting zoning ordinances.

Furthermore, areas unsuited to farming must be suited to some other form of constructive use. The proper use of these areas should be determined in order that public forestry, grazing, wildlife and recreation programs can be guided by the recommendations. State and Federal agencies need to know more about the areas that should remain in forest, farm woodlots, and open land in order that public forestry and other conservation agencies can be of greater assistance to farmers and other forest land owners in protecting their forest lands from fire.



Particular mention has been made of the numerous ways in which land use classification activities will serve the public programs administered by Federal agencies. It should be noted, however, that the various State agencies also have great need for the information and assistance which can be developed through county land use planning work. State agencies are participating to some extent in all Federal programs and in addition carry on many lines of administrative, educational, and research activities each of which can be better oriented through the results of land use planning, particularly land use classification. Likewise, the farmers and other local people who participate in the County Agricultural Planning project are benefited not only by the more effective application of public programs to their particular needs and conditions, but they also obtain a better understanding of the use capabilities of their land, much information on better farming practices, and an insight into the particular features of local land use problems. Such work will directly aid local communities by providing the basis for informing prospective settlers of farming opportunities, reducing local relief costs, aiding States and counties in handling their tax delinquency and tax-deed lands, securing more equitable taxation, avoiding wasteful expenditures for reclaiming poor land, granting credit, and forwarding many other activities which affect the use of land and water resources.

Since their inception, County Agricultural Planning Committees have displayed a genuine interest in public programs, and on numerous occasions have taken an active part in them. Likewise, the agencies responsible for carrying out the programs have come to place more and more dependence upon farmers and other local residents for advice and other assistance in fitting the programs to the particular problems, conditions, and needs of each locality. Although Agricultural Planning Committees have made notable progress they have an excellent opportunity to attain a still higher position of local leadership. The attainment of this leadership, however, will depend to a large degree upon full knowledge of local situations, the soundness of the Committees' conclusions and recommendations, and upon the extent to which their recommendations can be interpreted and used by the several agencies in carrying out programs in the field. This means that county planning work should be soundly based upon a fund of factual information, and that the results must be developed and presented to the agencies concerned in an organized and systematic fashion. Past experience leads to the opinion that this can be done most effectively by carefully worked out County Land Use Mapping and Classification Projects. The suggestions contained in this work outline represent the conclusions of the several agencies in the Department regarding the particular type of mapping and classification work which will be most useful to the Department, the Land Grant Colleges, and to others, including the local communities.

#### B. Main Features of the Land Use Mapping and Classification Work.

The land classification work being proposed by the Department does not represent a new type of work or a wide departure from the land use mapping work recommended previously. But rather, it is a refinement and extension of the work with considerably more emphasis placed upon an orderly procedure for developing the maps and information related thereto, and for putting the materials into a usable form. It will be noted



that the land classification maps are to be accompanied by a report for each county where the work is undertaken, and that the committees are requested to supply recommendations for desirable land use adjustments for each class of land. Following is a brief summary of the various phases of the proposed land classification work. These are discussed at considerable length in succeeding sections of this outline:

1. The first major phase involves: (a) breaking down or subdividing the county and community map into a number of local land use areas, each of which is relatively uniform throughout with respect to the similarity or pattern of its physical features, present land use, and existing land use problems; and (b) the presentation, in the report, of a brief description of the important features of each area and the land use problems existing therein.

The aim of this phase of the project is to designate the boundaries of local land use areas which should be distinguished from each other, for planning purposes, because they each represent basic differences in the combination of physical and land use characteristics between the several parts of the country or community.

2. The second major phase involves the classification of each of the local land use areas designated in phase number 1. This is an analytical classification in which areas are classified and in which the categories or classes are expressed in terms of the suitability of the particular area for some selected use or combination of uses.
3. A third phase consists of explaining, in the report, what types of shifts in land use or adjustments in farming practices are desirable for each of the land use areas, with due reference given to the class in which the area was placed under phase number 2. Included also in this section are suggestions, recommendations, and conclusions concerning the policies or measures which should be taken to secure or accomplish the shifts in land use and adjustments in farming thought desirable.
4. The fourth phase of the project involves working up the findings and recommendations for each county into usable form and making the materials available for use in the county and the State by those concerned, including the transmission of a copy of the results for use in the Department.

C. Applying the Project in the State and to Previous Land Use Classification Work.

In developing this work outline, an attempt was made to make it widely applicable as a guide for securing Nation-wide comparability of results. However, it fails to mention a number of conditions, including land use problems and classes of land which are of considerable importance in some localities and in some States. It is desired that the land use mapping and classification work be made as applicable to the conditions and peculiarities of individual States as possible.



However, it is necessary also to maintain sufficient national uniformity to assure that the results will be useful to the Department. It will be possible to accomplish this and at the same time modify particular phases of the work to make it fit local requirements.

Accordingly, the State project leader and other extension leaders associated with him, in carrying on the land-use planning work, are requested to study this work outline and to prepare recommendations for desirable modifications which may be considered at the sectional conferences of extension directors, project leaders, economists, and district agents, scheduled for September. Such questions as to whether sub-classes should be added to the standard categories may need to be considered, as well as questions concerning desirable land-use adjustment measures and shifts in farming practices. Any subclassifications recommended need to be very carefully defined.

At these sectional meetings the methods of organization and procedure in carrying forward the land-use planning project will be discussed and the ground work laid for the development of State plans of work. Individual State plans of work will subsequently be prepared in each State in cooperation with the respective State Advisory Councils and submitted to the Department of Agriculture. These State plans of work should detail the procedures which will be followed in a State in general accordance with the terms of this work outline.

In order that this project will have the greatest immediate usefulness, the counties selected in each State this year should be distributed so as to have at least one county in each distinct type-of-farming area, and to secure a reasonably representative sample of the various agricultural and land use conditions in the State. This is important inasmuch as certain of the data developed in each county will be combined, weighted and used to secure estimates pertaining to the State itself. This means that the project leader will need to give careful attention to the problem of securing comparable results from each county in which the work is initiated. This can be accomplished only if the nature of the proposed work is clearly understood by each committee and if they are given careful guidance as the work progresses. It is suggested that the State Agricultural Advisory Council divide the State into land use problem areas, or sections, each having a distinct set or combination of land use planning problems and select counties which will be representative of the areas.

In selecting counties, the States are not limited to those counties which did not complete the land use mapping work last year. If it is desired to work in counties which are mapped and classified, the project leader should start this year's work at the point where it was dropped last year. Usually this will involve giving the committees an opportunity review their maps with particular reference to possible revisions of the boundary lines, and then complete the project by preparing the county report and answering the questions which are pertinent to each of the areas mapped and classified.



When deciding upon number of counties, it is important to bear in mind that this project requires considerable leadership and guidance, and also that the value of the work to the action programs is largely contingent upon its completion in those counties where it is conducted. It is desired that each State will conduct the land use mapping and classification work in as many counties as practicable this year and plan on extending this work to the remaining counties in each State in subsequent years.

#### D. Establishing Land Use Planning Communities:

Past experience in land use planning work suggests that this project can be conducted most effectively on a community basis. Therefore, it is recommended that one of the initial steps involves the division of the county into land use planning communities and the designation of membership of each community committee. These community committees are responsible for the land use mapping and classification work in their respective communities.

In many counties, community boundaries have already been established for Agricultural Extension, Agricultural Adjustment Administration and other programs. Generally these established boundaries will serve satisfactorily for land use planning communities. In some cases, however, the use of other boundaries such as a Soil Conservation District, the boundary of a Land Use Adjustment Project, Drainage District, Minor Civil Divisions, etc., may be desirable.

The following sections of this work outline cover the details of the project, including definition of terms, references to useful kinds of information, and suggestions on procedure for handling the several phases of the work by each land use planning committee.

## II. THE LAND USE MAPPING PHASE

As explained previously this phase of project is designed to break down each community map into a number of homogeneous local land use areas each of which will be relatively uniform throughout with respect to: (a) its main physical features; (b) the present land use and types or systems of farming; and (c) the existing land use problems. Included also is a brief description of the significant characteristics of each of the land use areas so designated. This phase of the project must be clearly distinguished from the land classification phase which comes as a later step in the procedure. The land use mapping phase provides the background information and the geographic setting for other phases of the project. It not only provides a convenient basis for giving geographic expression to pertinent information and data, but also designates the boundaries between the several sections of a community having important differences in physical and economic characteristics. When the mapping work is completed each community map will have been subdivided into areas so designated that each area will have at least one, and often more, important features not present in the adjoining areas.



A. Base Maps for Land Use Mapping Work.

Although any accurate base map may be used for this project, the use of maps having a scale not less than one inch to the mile will be desirable. Maps showing the main cultural features (roads, streams, cities, etc.) and boundaries of county subdivisions (section, township and other civil boundaries) will be particularly helpful in this work. Boundaries of National Forests, State, and National Parks, and other public land units may be included. The county highway maps obtainable from the State highway departments, or the detailed soils map of the county, will serve as desirable base maps.

B. Procedure and Criteria for Designating Local Land Use Areas.

Local land use areas<sup>1/</sup> generally can be designated fairly well by the various community committees from their general knowledge of the locality. However, soils maps, conservation maps, topographic maps and aerial photographs where available, will be of great help in determining the boundaries more precisely. It will be found also that AAA contract data, crop yield information, ownership maps, present land use maps, cover type maps and other land use planning information will be valuable for this and other phases of the project.

The best procedure for establishing land use area boundaries involves considering the several important physical and land use features and the land use problems of the community one at a time. As important variations or differences are noted in the particular feature under consideration, lines should be placed on the map to set off the several areas where these differences occur. The process is simply a series of subdivisions of the community map as additional features are successively taken into account and as variations are identified geographically.

Offhand it may appear impossible to designate land use areas in this fashion because of the complex patterns and the numerous variations in physical characteristics within most communities. It must be remembered, however, that this project is not designed to supply a detailed map of the many features of the community, but rather it is an attempt to mark out areas in each of which the particular combination of detail has resulted in distinct patterns of land use. For purposes of this project, it will often be desirable to distinguish both physical and land use characteristics in terms of patterns or mixtures of features. This will greatly simplify the work by eliminating the need for identifying minor variations and locating very small areas on the map. For example, a particular area may contain a complex mixture of different soil types with each of the types comprising only a small area.

<sup>1/</sup> An area for purposes of this project should include several farms at least and be larger if possible. The object is not to map individual farms or parcels of land but rather to map and classify larger areas.

The Committee would merely recognize this as a particular pattern of soils, and draw the boundary line around the whole area where this feature exists. To reveal the nature of the pattern clearly, the committee would describe the area accurately in the text of the report accompanying the map. The same situation will exist with respect to types of farming inasmuch as many areas contain several different types of farms interspersed throughout the area. These type-of-farming areas likewise will need to be designated according to the uniformity of the pattern of types or the number and distribution of types over the area.

Another very important consideration to be taken into account in deciding upon the boundaries of land use areas, particularly in so far as physical features are concerned, is to distinguish areas having features which either (1) definitely limit the use which may be made of the land, (2) supply particularly favorable conditions for certain uses of the land, (3) create special soil management or land management problems, (4) provide natural barriers between areas, or (5) are associated with particular land use adjustment problems because of the fact that the several physical and land use features of an area are more or less related, often the boundary line for one factor such as topography or soil, for example, will also mark the boundary of one or more other significant characteristics such as the existing type of farms or the use being made of land.

In view of the many different combinations of physical and land use features which may be significant, and because of marked differences between States and even sections of a State, it is impractical to list or set up a standard set of classes to be followed universally in designating land use areas. However, a number of suggestions and illustrations are presented below to indicate the type of distinctions which are important for this project. In applying this work outline to a particular State or County it will be possible, and may even be desirable, to set up more definite categories for use by the committees.

Physical Features: The important physical features to be taken into account in breaking down the county into uniform areas can be grouped broadly under the headings of Soils, Relief, and Climate. Although these are often closely associated, especially the first two, each of these factors will be expressed in many different ways when applied to a particular community. For example, differences in the texture of soils may be important, and the committee will distinguish between the principal soil classes such as sand, sandy loam, loam, silt loam, clay loam, clay, peat, or muck, or modifications of these classes such as gravelly sandy loam, fine sand, etc. Other distinctions may be based upon the depth of the surface soil, the relative amounts of organic matter, color, the ease or difficulty of tillage, the internal drainage or "wetness", the stoniness, the existence of high acidity or high salt content, amount of erosion, etc. In those instances where soil surveys are available a soil type or a grouping of soil types will be used, or possibly soil phases such as eroded phases, shallow phases, etc., of particular soil types. Occasionally the distinctions may be expressed in terms of forest land soils, grassland soils, valley soils, etc. Where recent soil surveys are available, either in published or manuscript form, advantage should be taken



of them. Those soil survey reports containing a table of soil productivity rating are especially useful. In considering surface features of the land, distinctions might be made between flat lowland areas, flat uplands, gently sloping, rolling, hilly, rough mountainous or some modifications such as gently rolling, etc. In a few counties slope maps classifying the areas in terms of percentage of slope are available. These maps may be used to good advantage in connection with this project. In all recent soil surveys, the soil types and phases shown on the map are defined in terms of slope and such maps and recent topographic maps are the best sources of published information.

Generally, climatic conditions will not vary greatly within a given community except when there are marked differences in elevation and topography, or where part of the community is influenced by large bodies of water. The most common climatic factors to be considered are important variations in precipitation and the length of growing season. The existence of frost belts, drought belts, temperature zones, hail belts, may be distinguished also.

Very often the committee will distinguish areas upon the basis of combinations of physical characteristics, and will wish to use general terms to characterize land types such as swamps, tidal marshes, scablands, bad lands, meadowland, deserts, etc. In all cases, the committee should map or indicate areas which are subject to periodic or occasional flood damages.

Present Major Land Use and Types of Farming: After the community map has been subdivided according to important differences in physical features it should be subdivided further on the basis of existing differences in the present use being made of the land and the present types of farming followed in farming areas. In doing so it will be found that the boundaries already drawn on the basis of physical features also mark the boundaries between some of the areas having differences in present land use. Usually, however, it will be necessary to further subdivide such areas so as to cover the important local differences in present land use.

In further subdividing the community map to distinguish areas having significant differences in present land use it will be necessary for the committee to recognize, among others, the following distinctions, and draw the boundary lines so they will clearly differentiate the areas on the map.

1. A distinction between areas which contain arable farms and those which have very few or no arable farms should be made. For this project an arable farm is considered to be a farm having 10 per cent or more of the farm acreage in cultivated land, including pasture rotated with crop land, orchards, fallow land, and land temporarily idle. 1/

It will be valuable also to distinguish between various subclasses of arable farming areas on the basis of the proportion of the total land area which is in arable farms. For example, a committee might have three classes of arable farming areas; the first being all areas in which 85 per cent or more of the total area is in arable farms; the second having from 50 per cent to 84 per cent; and the third having between 10 or 15 per cent and 49 per cent in arable farms. The percentage breakdown selected will depend upon the particular land use patterns in each county and upon the extent to which the location and distribution of arable farms are associated with other features of the community; thus, each committee will need to decide upon the subdivisions which are important.

2. A distinction should be made between areas which are in livestock farms or ranches, and areas in "open range", "free range", "community pastures", etc., and blocks of publicly owned and managed grazing land. A livestock ranch generally will have very little of the farm acreage in crop land or will use most of the crop land for producing winter feed for its livestock to supplement the grazing of range or pasture lands, and will secure most of its income from the production and sale of livestock.
3. A distinction should be indicated on the basis of different types or combinations of types of farms as determined by the main sources of the farm income, such as, dairy, cash grain, cotton, tobacco, livestock, poultry farms, etc. The crops grown and livestock or livestock products produced should be listed in the report in the order of their importance for the type or types of farms found in each area. Areas having a number of part-time farms where the operator normally depends upon work off the farm for 40 per cent or more of the family income should be indicated.
4. In mapping grazing areas, a distinction should be made between winter, spring, fall and summer ranges, and also between range areas which have marked differences in carrying capacity.
5. Surface and subirrigated areas, and those irrigated from surface storage as distinct from wells, should be distinguished. So also should diked and drained land areas, recent cut-over farming areas, and areas where new farms are now being established or have been settled recently (since 1930).

1/ The use of the term, arable farm, in this project has particular reference to the western States in which it is desired to distinguish between (1) stock ranches having little or no cultivated lands, (2) those farms which contain significant acreages of cultivated lands used either for cash crop production or feed production consumed on the farm by livestock or sold to livestock operators. In other parts of the United States, dairy and other types of farms containing significant acreages of improved pasture (cleared, seeded, etc.) should be considered as arable farms.



6. Areas primarily in forest or woodland, and recent logged off lands not now in farms should be distinguished from areas not so characterized.
7. Recreational areas and parks should be distinguished when the areas have been dedicated to these uses to the exclusion of other uses. Also areas of outstanding scenic value or particularly useful for public camp, picnic grounds, etc., may be distinguished.
8. Areas containing a number of rural residences or summer homes may be set off from areas not containing such residences.
9. Waste land areas and those containing large amounts of recently abandoned or idle land should be distinguished.

In many cases the land in an area will be used for more than one purpose, such as for grazing and forestry, or it will contain a mixture of uses and a number of different types of farms. Under these circumstances the committee will use the appropriate combination of classes to characterize the area, such as forest-grazing area, part-time farming-forest area, wildlife-livestock farming-open range area, dairy-cash grain farming area, etc. The predominant use should be listed first. For this project, in considering joint forest and grazing or pasture uses, the committee will consider forestry the predominant use when 40 per cent or more of the ground area is covered by shade from standing timber. In describing the land use areas, the committee should indicate the relative importance of the several joint uses of each area and should clearly explain the features of the present land use pattern.

Designating Land Use Problem Areas: The final basis for subdividing the community map into uniform local land use areas is the location of land use problems. Generally it will be found that the subdivisions of the map, done previously on the basis of difference in physical features and present land use, cover most of the land use problem area. If, however, a particular land use problem or group of problems covers only part of an area previously designated, the committee should draw the boundary lines of the problem area on the map as accurately as possible. Some of the problems which the committee will wish to discuss in their report do not apply exclusively to any particular area, but are important in many contiguous areas or in all parts of the community. This fact should be indicated in the report.

To identify or recognize land use problems or existing maladjustments in land use in an area is not always a simple task. It involves an appraisal of the ways and conditions under which people are using the land resources, and a determination of whether the present use or conditions of land use are creating a situation which is contrary to the public interest. This necessitates establishing some rather clear ideas of what constitutes misuse of land from the public point of view.

For purposes of this project, the best expression of the public interest in land use can be obtained by examining the basic objectives of various public programs. These objectives, reflect conditions of land use which the people, through their government, have decided are undesirable and, therefore, represent problems to be corrected. Using this as a basis, it is possible to group land use problems into seven broad classes, namely:

1. Conditions of land use which cause waste or loss of land and water resources;
2. Situations where persons dependent upon the land are receiving inadequate incomes to maintain desirable living standards;
3. Injury to health and property values created by land use practices in other areas or even other counties.
4. Conditions of land use which are creating hazardous, dangerous, or unhealthful conditions of land occupancy, even though these conditions are created in some other county or State.
5. Conditions causing decadence of desirable community institutions;
6. Conditions of land use which cause inefficient or wasteful use of public funds; and
7. Other situations under which the land is not used efficiently.

In mapping and describing land use problem areas, the county committee will need to break down these seven classes of problems into categories which explain more specifically the particular form of the maladjustments in land use in each area.

It is evident that the waste of land and water resources may be brought about in various ways, such as through soil erosion, excessive depletion of soil fertility, or the application of limited water supplies to poor grades of land. Soil erosion in turn may be the result of unwise cropping practices, or may reflect situations where land being used for arable farming is physically unsuited for such use. Likewise, soil fertility depletion may be associated with farm units that are too small, may be the reflection of a prevailing system of land tenure and overcapitalization, or may be brought about through excessive burdens of local taxes. In the same way, there are a large number of immediate forces which cause or contribute to low incomes and inadequate living standards of rural families.



Some of these forces may be associated with the physical characteristics of the land, others may be due to local economic or social conditions. In some situations low incomes may be the result of poor organization of farm business, or may be explained by the fact that the type of farming followed is poorly adapted to the area. In other situations low incomes may be the result of losses of supplementary sources of employment upon which rural families formerly depended. Again, low incomes may be the result of soil depletion which, in turn, may be explained by insufficient information necessary to establish farming systems which prevent soil wastage. These and many other conditions affecting the cost of farming or the gross returns from farming will account for inadequate incomes in particular situations. Hazardous land occupancy may be associated with floods which, in turn, may be caused by some existing misuse of land. Scattered or isolated farms may characterize a land use problem because they are creating excessive costs of public services. Certain types of public financial aid or public subsidies may involve a land use problem because they encourage the continuance of wasteful systems of farming and inefficient farm organization, or because they encourage the use of lands for farming which should be used for some other purpose.

In considering the conditions of farm tenancy the committees should seek to determine whether tenant systems of farming constitute a factor contributing to soil wastage; uneconomic and inefficient farm organization; over-capitalization and excessive indebtedness; unsound development of farm and community habits, institutions, and modes of living; and an unstable and unbalanced agriculture. These conditions may grow out of farm tenancy because the tenant usually faced with insecure tenure, frequently has no permanent interest in either the farm he is operating or the community in which he lives. This obviously is not conducive to conservational systems of farming. In some areas tenancy problems may be the direct result of the widespread use of customary crop-share or other types of leasing arrangements which encourage the production of soil depleting crops and discourage the growing of soil conserving crops and types of farming which make efficient use of such crops. In areas where tenancy is associated with absentee ownership, the incentive to "mine the soil" and follow other undesirable farming practices is in many instances created by the attitude of the landlord.

These examples can be expanded many times but they are sufficient to illustrate the form in which land use problems are to be described. The most important aspect of this phase of the project involves relating particular problems to their immediate basic causes and to their local land use setting. The several public agencies are mainly interested in knowing the peculiar features of land use problems in each locality, and wish to have the community planning committee point out the circumstances under which the problem was created in the particular area.

After the community map has been divided into its local land use areas, each of the areas should be given an identification number. (Number areas consecutively on the map - 1, 2, 3, etc.)

#### C. Describing the Main Features and Problems of Each Land Use Area.

As explained previously one of the parts of the land use mapping phase involves describing the characteristics of each local land use area, including the existing land use problems. In order to make certain that all important items of information about each community are included in the county report, each community committee should prepare a brief community report to accompany the map, and to be used by the county committee in preparing the county report. Because various items of important information will be brought out during committee discussions as they carry on the several phases of the project, it will be desirable to have some member of each community committee act as committee secretary with responsibility for taking significant notes from the discussions for use in the community report. The committee secretary should write or supervise the writing of the community report using the information supplied to him by the committee.

After designating the land use areas, the committee should supply its secretary with the important facts to be used in a brief description of each land use area and an explanation of the nature of the land use problems. In most instances this will consist of a few sentences about the physical and land use characteristics with particular reference to those particular features which distinguish one area from the others. A rather complete statement may be made for Area number 1, followed by briefer statements for each of the other areas, pointing out only the significant differences between the features of Area 1 and the other areas. For example, the statement on physical features for Area 2 may read, "This area has the same physical characteristics as Area 1 except that it has a rolling instead of level topography and also has many small patches of sandy soils which are susceptible to drifting when devoted to clean cultivated crops."

In deciding upon the importance of various physical and land use features to be included in the description, the committee will be guided by the suggestions and criteria used as the basis for delimiting areas as explained in Section B above. It is important not only to point out those existing differences between areas which led to drawing the area boundaries but also to include information on the present patterns of land use, types of farming, and physical conditions in each uniform area. Particular efforts should be made to include a good statement of the nature of land use problems and their causes. The identification numbers entered on the map should always be referred to in the report when presenting information applicable to specific localities.

Special Types of Descriptive Information Desired for Each Area: In order to avoid unfavorable reactions of the committees, and an over-emphasis of the first phase of the work at the expense of good work on later phases or the completion of the project, the project leaders working with the committees will need to handle carefully the descriptive portions of the work. Special care should be taken to avoid asking the committees so many questions that they tire of work. There are, however, a number of kinds of information about each land use area which are particularly valuable to the various public action programs, and which should be obtained from the committees if possible



and included in the county report. Some of these lines of information are very important in some States and of only secondary importance in others. In applying this work outline to his State the project leader should consider which of the items listed below are not particularly pertinent to his State and which may be eliminated if necessary. These suggested modifications will be considered at the sectional meeting. An asterisk (\*) is used to indicate those items which the Department suggests might be deferred until another year. This, however, is subject to some variation between States. Following are the types of descriptive information desired for each area:

1. For each arable farming area estimates should be included of the percentage of the land area which is in operating farm units, the average percentage of land in farms which is normally in cultivation and a list of the crops grown in the area in order of their relative importance in the farm organization. The type or types of livestock which are kept on the farm and an estimate of the approximate number of each type normally kept on the average family sized farm in the area should also be included.

\* How the crops and livestock are generally disposed of, (sold for livestock feed, grain sold for cash, crops fed to dairy cattle and hogs on the farm, livestock marketed as feeder or grass-fattened animals, etc.) should be explained. Any recent tendencies toward marked shifts or changes in the type of crops grown or in the disposition of farm products should be explained with supporting reasons.

\* In each farming area the proportion of white and colored farm operators in the area, the predominant nationality of farm families should also be indicated.

2. For each part-time farming area the sources of supplementary income should be pointed out. Whether employment from these sources has increased, declined or remained at a rather constant level during the past five years should also be indicated.
3. For each area which is subject to periodic damage from floods, the nature of the damage should be described, and the seriousness of the damage to farm land occupancy, and public or private property should be explained. The seasonal nature of the floods and any practices followed that contribute to rapid run-off should also be pointed out.
4. In all areas where tenancy is prevalent, a rather complete description of the tenancy system is desirable <sup>1/</sup> Because of regional differences in the tenure systems, the information desired will not be the same for all sections of the country. The committee, therefore, should supply that information outlined below which is most nearly adapted to each particular area.

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<sup>1/</sup> Tenancy involves both farm tenants who rent all of the land they operate and part owner farmers who rent only a part of the land they operate.

The committee should indicate the proportion of farmers in each farming area who rent all of the land they operate, and the proportion who rent only a part of the land they operate. In describing the farming areas, the committee should estimate the proportion of tenant farms in the area that are rented by each of the following methods:

- (a) Cash
- (b) A stipulated amount of crops or livestock products
- (c) A proportionate share of the crops under:
  - (1) Share rental contract, and
  - (2) Sharecropping contract
- (d) A proportionate share of livestock products
- (e) A proportionate share of both crops and livestock products, and
- (f) Other types or combinations of these forms of rental payments.

For each of the most prevalent of these methods of renting, the committee should briefly describe the most common renting arrangements used in the area in terms of whether the agreement is written, length of term of lease, termination date, amount of supervision by landlord, provisions for notice of termination or renewal, and provisions for maintenance of terraces and other soil conserving practices, and provisions for making soil treatments.

\* In the southern section of the country, farm tenancy is commonly referred to as either the plantation system, the independent renter system, or the resident-operator system. <sup>1/</sup> In some sections of the Great Plains, the tenancy system is characterized by a large number of small absentee owned units operated by tenants; in certain irrigated areas, the land is rented to commercial producers who farm it intensively with either subtenants or hired laborers; and in some Middle Western areas the land is owned in large units and rented by several individual tenant farmers. In describing the farming areas, the committee should explain which of these systems or combination of these systems or other system predominate in each area and major exceptions to the predominant system.

- 5. In each range area the number of acres of range land normally used per animal unit of livestock should be estimated (considering an animal unit to be equal to a mature cow or horse, or five sheep). Whether the range area is used exclusively by livestock operators owning land in the adjoining areas or whether outside livestock are

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<sup>1/</sup> The "plantation system" is characterized by a predominance of a large scale agricultural enterprise composed of five or more contiguous or nearly contiguous tracts operated by renters or croppers. The "independent renter system" is characterized by the scattering of a number of individual family-sized farms independently operated by renters or croppers. The "resident operator system" is similar to the plantation system except that the manager of the operating unit is resident on the farming unit which is composed of less than five contiguous renter or cropper operated tracts of land.



grazed there also should be explained. Where grazing and forestry are joint uses of an area the relative importance of each type of use should be indicated. Whether the joint use is creating any serious land use problems should be explained.

6. For areas having forest land we need to have the following information:

(a) How much of each area is in woods: One-fourth, one-half, three-fourths, or more?

What are the principal kinds of trees in each area?

How much of the woodland in each area has:

(1) Mostly large trees (14 inches in diameter and over in hardwoods, or 9 inches and over in evergreens) one-fourth of the area, one-half, three-fourths or more?

(2) Mostly medium-sized trees (4 inches to 14 inches in diameter in hardwoods, or 4 inches to 9 inches in evergreens) one-fourth of the area, one-half, three-fourths or more?

(3) Mostly brush, scrub, or small trees (less than 4 inches in diameter) one-fourth of the area, one-half, three-fourths or more?

Note: The answers given for (1), (2) and (3) should total (a).

\*(b) How many sawmills, stave mills, shingle mills, turpentine stills, timber treating plants, or other woodworking plants are there in each area and where are they? Spot them on the map and indicate what each one is and how much it can produce a day.

### III. THE LAND USE CLASSIFICATION PHASE

The next major phase of the project involves the classification of each designated land use area in accordance with the committee's conclusion and recommendation concerning the most desirable use of the land.

If the land use areas have been properly outlined, it should be possible to place each of them, as a whole, into one or another of the classes hereinafter defined. If any land use area is found which falls partly in one class and partly in another, that area should be divided into two land use areas so that each falls wholly into a single class.

Before outlining the desired work it is pertinent to indicate the relationship between this phase and the preceding phase of the project. It may be argued that a committee, being composed of well-informed men closely familiar with agricultural conditions in their local community, is in a position to make a classification of land in terms of desirable uses without carefully going through the first phase of this project. A committee may, indeed, proceed in this way. Neither the committee nor the public agencies, however, would be in a position to know the extent to which the composite conclusions reflected in the classification had taken into account all the facts, relationships, and ideas relevant to the basic land characteristics, the land use problems, the alternative uses of land, etc., in their community. In other words, there would be no way of determining how "good" the classification is, and no basis for correlating the work between communities and counties.

Since this second phase of the project requires a consideration of desirable land uses in the light of present conditions in an area, it is clear that the classification is dependent upon two kinds of information: (1) One kind of information consists of opinions on reasonable alternative uses of land in the area. These opinions will depend upon the knowledge and the experience of the farmers in the local community, and upon the degree to which the facts describing the subdivisions of the area are suggestive of alternative desirable uses; (2) The second kind of information consists of factual knowledge of the physical features, present land uses, and the nature of land use problems in the component parts of the county.

Pertinent information and data must be available equally to each individual contributing to the composite opinion. The soundness of the committee's opinion is thus in large part proportional to the mutual understanding of descriptive facts, to the access each individual on the committee has to the same group of facts, and to the freedom each has in interpreting these facts from the standpoint of desirable land uses. To the extent therefore, that classification in terms of desirable uses is dependent upon this second kind of information, the designation of local land use areas, set forth in the land use mapping phase above, constitutes a prerequisite to the second phase of the project.

Not only is the first phase of the classification necessary from the standpoint of logical soundness of opinion regarding desirable uses, but it is also highly desirable in that it constitutes tangible evidence of the materials which help to support the conclusions regarding desirable land uses. It provides a factual foundation upon which the programs of public agencies may be built, and it constitutes a basic record of fact which may be kept current and built upon by modifications and refinements from time to time as the county land use planning program proceeds.

The classification work involves having each community committee arrive at a conclusion regarding the most desirable use of each of the land use areas designated previously. In order to secure desired uniformity they should use the classes or categories recommended last year. However, in order to reveal important local differences or to secure desired modifications or qualifications of the main class, it will be desirable in many instances to set up subclasses under one or more of these main classes. These subclasses should be worked out by the project leader with the assistance of the planning technicians in the State and transmitted to the Department in the state work program with necessary definitions and explanatory information on the kinds of distinctions desired. Each of the subclasses adopted should be expressed in terms of desirable use to make them conform to the main classes.<sup>1/</sup> Following are the main classes to be used.

<sup>1/</sup> Generally the most useful subclasses for the various Department programs will be those which show some breakdown in the extent or degree of recommended adjustments or shifts in major land use, cropping systems, farm and ranch reorganizations, etc; or where the subclasses indicate the relative proportions of farms to which recommended adjustments apply; or where immediate land use goals are distinguished from long-time goals. In this connection, however, it should be remembered that many of these qualifying land use recommendations can be expressed very satisfactorily in the report. In planning work, the use of definite classifications and subclasses has the advantage of providing a basis for presenting information on maps, and serves as a device for centering attention on specific questions to be answered.



A. Areas Now in Farms Which Are Not Suited for Arable Farming and in which the Lands Should be Put to Some other Use.

The Committee should mark those areas "A" in the identification number (3A, 5A, etc.) and color them blue.

Areas in this class as distinguished from those in Class "E" are the poor land areas where the farm income is normally too low or too unstable to maintain the farm plant, provide adequate living standards, and maintain the public services. In special cases this class will include areas which have a few scattered isolated farms where the land not in farms is physically unfit for arable farming and thus cannot support closer land occupancy.

If the area contains arable farms, and if the area is recommended for livestock ranches, it falls within this class because a livestock ranch has been defined as a non-arable farm.<sup>/1</sup> In some instances the recommended use of an area will be for forestry, recreation, watershed protection or water supply sources, to the exclusion of all farms of any type. In other cases the main objective of eliminating arable farms is to eliminate isolated land occupancy which is costly to the public, creates a serious fire hazard to timber land areas, or in other ways seriously affects the value of the area for some special use for which it is particularly well adapted.

Included in this class also will be areas which are unsuited for arable farming because the limited available irrigation water supply makes it desirable to use the water in some other area. Drained or diked lands where the drainage enterprise is failing to the extent that farming is not profitable and where it is not feasible to attempt to improve the drainage conditions fall within this class.

In many instances these areas can be identified by the conditions of the farm plant. If the farm buildings, equipment, and fences are falling into a state of disrepair, abandonment or ruins, it is likely that the area is unfit for arable farming. This is particularly true in the older farming regions, but may not be so true in recently settled areas which have not had time to readjust the types or systems of farming to the use capabilities of the land. Some areas that are suited to farming have poor buildings as in areas of cotton share-tenants and croppers, but in such areas buildings are maintained in about the same state of repair through the years and represent sufficiently favorable conditions to keep farming on a continuous basis, even though unsatisfactory from some points of view. Income from farming in these Class A areas is normally too low to keep farmers off relief rolls or from becoming destitute, and no dependable source of non-farm work is available to supplement the income from farming. Where such areas are also characterized by low average crop yields, frequent crop failure, poor soil, poor drainage, steep slopes, severe soil erosion, much rock outcrop, or other like features, they are almost certain to be unfit for arable farming. The soil map and report of the county

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/1. See definition of arable farm on Page 9.

will help to locate areas having unfavorable physical conditions.

Other indicators of poor areas may include conditions of chronic farm tax delinquency, very few home facilities, such as, lights, telephone, etc., and the absence or decadence of community institutions (churches, schools, etc.) These indicators alone, however, should not be taken as conclusive evidence that the area is not suited for arable farming. In each case inquiry must be made as to the causes of the situation, and conclusions reached concerning the possibilities of using the area under some different system of arable farming.

- B. Areas Not Now in Farms, and Which Should Not be Used for Arable Farming Because They are Unsited for this Use Either as Full-time or as Part-time Farms Used in Conjunction with Existing Dependable Opportunities for Non-farm Work.

The committee should mark these areas "B" and color them green.

These areas will have many of the physical characteristics of the Class A areas. Poor soils, steep slopes, much stone and rock outcrop, etc. They may be the costly areas to clear, drain, or irrigate from the standpoint of probable returns from farming if the land were reclaimed. They may be small areas too remote from existing roads and schools to justify the necessary expenses of providing public facilities.

- C. Areas Now in Farms, and Which are Questionably Suited for Arable Farming

The committee should mark these areas "C" on the map and color them red.

The committees should use this class only where necessary, because it is desired to secure as much definiteness as possible regarding the suitability of various areas for particular uses. When areas are placed in this class the committee should carefully explain whether the area is marginal or whether they have classified it as questionable because insufficient knowledge or information is available concerning the area and the opportunities for effective use of the land.

- D. Areas Not Now in Farms, but Which are Suitable for Development into Either Part-time or Full-time Farms

The committee should mark these areas "D" and color them orange.

These areas will have favorable physical characteristics for farming, will be favorably located with respect to markets and public facilities, and can be reclaimed at costs which are low enough so they can be paid for from the returns from farming the area.

Perhaps the most valuable indicators of this class of area will be obtained from comparisons of the prospective farming area with successful farming land having the same characteristics and the same types of reclamation problems.

- E. Areas Which are Now in Farms, and Which Should Remain in Arable Farming, Either With or Without some Changes or Shifts in the Size and Type of Farm, the Cropping Systems, and Soil Conserving Practices Followed, or Other Adjustments in the Farming System.

The Committee should mark each of these areas "E" in the identification number of the map and color them yellow



These generally are areas in which past farming experience has demonstrated that arable farms of some type can produce, under average managerial ability and under a conservational method of farming, enough farm income, year in and year out to (a) provide the farm family with an adequate living, (b) maintain the farm plant and pay reasonable returns on the investment, and (c) pay its proportional share of the costs of reasonably good public services. The standards for public services and adequate family income will need to be determined on the basis of acceptable standards in each community.

In some instances areas may be physically suitable for farming, but because of hazards to life and property, or because some other use of the land is more desirable from standpoint of flood control, sanitation, wildlife management, or other public purposes, the committee may place the area in some other class.

F. Special Classification of Restoration Lands in the Great Plains Regions.

In addition to the above classification of areas, the Department and States in the Great Plains Regions are greatly in need of a supplementary map showing the location of land that has been in cultivation since January 1, 1930, which in the opinion of the committees should be designated as restoration land. 1/ Accordingly, when the project is initiated in those counties of the ten Plains States which may qualify for restoration land payments under the AAA program, the project leader should include this special classification in the work.

The restoration land map in effect will involve the subclassification of all areas which are suitable for arable farming but which contain some cultivated lands, either entire farms or portions of farms, which should be permanently retired from cultivation. In addition it will include those areas containing farms which have been classified as unsuited for arable farming.

In general, the type of map prepared will vary from State to State, depending upon the data available and the number of counties in which the work is carried out. In some States, for example, certain wheat yield data and other maps that have been prepared by the State College should offer a good basis for the farm-to-farm designation of restoration land. In two States in the North Central Region, South Dakota and Nebraska, the information contained on North Central Region Form 203 for 1938 should offer an equally good basis for the designation of restoration land. In other States, the type of data available will vary widely and the bases used will depend considerably upon the ingenuity of the project leader and research workers who are interested in the problem. Further consideration of specific categories and ways of securing the restoration land map will be discussed at the regional conference of project leaders and planning technicians.

1/ For this project the committees should use the definition of restoration land contained in the Agricultural Conservation Program Bulletin, viz., "farm land, in areas designated by the Administration, subject to serious wind erosion and containing large acreages unsuited to continued production of cultivated crops, which has been cropped at least once since January 1, 1930, and which is designated by the county committee as land on which, because of its physical condition and texture and because of climatic conditions, a permanent vegetative cover should be restored."

#### IV. SUGGESTIONS, CONCLUSIONS, AND RECOMMENDATIONS PERTAINING TO THE VARIOUS CLASSES OF AREAS

One of the important products of the committee's work on this project is their opinions and recommendations concerning desirable types of land use adjustment measures to be applied or followed in particular classes of land use areas. Thus, the community committees should include the following information in their report so that it can be consolidated into the county report.

##### A. Recommendations and Suggestions Pertaining to Areas in Farms which are Not Suited for Arable Farming (Class A - blue)

The Committee is requested to supply information on each of the following items for each area placed in the "A" class:

1. What percentage of the area is now in arable farms?
2. What use should be made of the area and the lands in farms that should be eliminated? (Timber production, grazing, wildlife, recreation, watershed protection or other uses or combinations of uses.) Explain these recommendations in sufficient detail to show clearly the nature of the adjustments recommended and the need or reasons therefor.
3. Would you recommend tree planting in any of the areas not now in trees? If so what lands would you plant?
  - (a) All open lands
  - (b) Steep slopes or eroding land only
  - (c) Limited areas in connection with going farms for timber, fuel, or fence posts
  - (d) For protection of fields, crops, buildings and feeding yards
  - (e) What kind of trees would you recommend planting
4. What work opportunities could possibly be developed, in forest or timber operations, new industries or other pursuits, that would make the area suited to permanent rural residence?
5. What specific things can the various public programs do to assist in accomplishing the adjustments recommended? What is the rapidity with which the adjustments should be accomplished? (Gradually, immediately, over long period of time.)

##### B. For Areas Not Now in Arable Farms and Which Should Not be Used for Arable Farming (Class B - green) the Committee Should Supply Comments on the Following Items:

1. Explain why the areas should not be used for arable farming, and also, what is the most desirable use (timber production, grazing, wildlife, recreation, watershed protection, or other uses or combinations of uses.)



2. What work opportunities could possibly be developed in forest or timber operations, new industries or other pursuits, that would make the area suited to permanent rural residence?
3. Suggest measures or devices to assure that the area will not be used for arable farming and will be devoted to a more desirable use.
4. Would you recommend tree planting in any of the areas not now in trees? If so what lands would you plant?
  - (a) All open lands
  - (b) Steep slopes or eroding lands only
  - (c) What kind of trees would you recommend planting
5. For those areas which are now used for pasture, grazing, or in livestock farms supply the following information for each area:
  - (a) The number of acres of range land required per animal unit if the range is to be conserved or improved.
  - (b) What is the present condition of the pasture or grazing lands in the area? Are they overstocked or otherwise misused? Are there any serious tendencies in this direction?
  - (c) To what extent do each of the following types of range-conserving practices need to be carried out if the range is to be conserved or improved?

Permanent or semi-permanent practices:

- (1) Percentage of range land that should be artificially reseeded
- (2) Percentage of range land that should be contour furrowed or terraced
- (3) Number of earthen or rubble dams needed to check runoff and furnish stock water.
- (4) Number of wells or spring improvements needed for proper distribution of stock
- (5) Percentage of range land that is now unfenced, but which should be fenced in order to obtain proper range control
- (6) Other practices of local importance (specify)

Practices to be performed annually:

- (1) Percentage of range land on which deferred grazing should be practiced, and

(2) Other practices of local importance (specify)

- C. For areas which are questionable as to their suitability for farming (Class C - red), explain whether the area was so classified because of insufficient facts about the area or whether it is a marginal area and seriously affected by small changes in prices of the products produced or in production costs. Supply the information necessary to provide a clear understanding of the reasons for placing the area in this class.
- D. For the areas which are not now in farms but which are recommended for farming (Class "D") the committee should supply suggestions on the following questions:
1. Does the land need to be (a) drained, (b) irrigated, (c) cleared of stumps or trees, (d) drained and cleared (e) irrigated and drained (f) other?
  2. What kind of farming seems most likely to succeed? Why? Could this type of farming be maintained over a long period without impairing the soil resource?
  3. Under what conditions do you think the areas could be profitably developed for farming?

For example:

- (a) If dependable sources of non-farm work could be assured, such as employment in forest or timber operations, new industries, or other non-farm pursuits.
  - (b) If large-scale, low-cost drainage operations are used to permit development.
  - (c) If settlement takes place in compact communities rather than becoming widely scattered, so that the costs of providing roads and schools will not be excessive.
  - (d) If increased demand for the products which the area can produce may be expected to justify its development
  - (e) Other.
- E. Recommendations for Land Use Adjustments in the Areas which Should Remain in Arable Farms (Class E - yellow)
1. For each of the land use areas falling in this class the committee should describe the character of soil conserving practices and cropping systems that should be followed on farms in the area; indicate the extent of the changes or shifts which should be made in present practices; and supply recommendations on crop and conservation goals for each area as a unit, using the following categories:



- (a) The percentage of present cultivated cropland on farms that should be continued in cultivation under a satisfactory soil conservation and land use program for the area. 1/
- (b) The percentage of the cultivated acreage that should be in each of the following three classes of crops. 1/
  - (1) Intertilled crop (included in this group should be corn, including field, sweet, and popcorn, but not sown corn; grain sorghums; broomcorn; cotton; tobacco; sugar beets and sugar cane; cultivated beans and peas, including field beans, soy beans, canning peas and cowpeas; peanuts, truck and vegetable crops, including potatoes, sweet-potatoes, melons, and strawberries; and other crops grown in rows and cultivated.)
  - (2) Small grains and other close-sown commercial crops. (Include rice, wheat, oats, barley, rye, flax, buck-wheat, emmer or speltz, and mixtures of any such crops; sudan grass, millet, sweet sorghums, broadcast sown field beans or peas, (including soy beans and cowpeas); and any truck or vegetable crop sown broadcast in this group)
  - (3) Grasses, legumes and hay crop (this group will include all legumes except as included in 1 and 2 above; all grasses sown or to be sown on cultivated cropland, except permanent pasture grasses on restoration land; mixtures of legumes and grasses; and small grains or other crops incorporated into the soil as green manure, provided such crops occupy the land a sufficient portion of the year to prevent the harvesting of a commercial crop.)
  - (4) Summer fallow.
- (c) The percentage of the cultivated acreage in the area on which the following specified soil-conserving practices should be carried out. (The estimates under this section should cover practices which will need to be carried out after 1938 performance under the Agricultural Conservation Program is completed)

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1/ In areas where erosion is not an important problem, where crop (arable) farming is unimportant, or where most of the land is already in hay or pasture, these percentages may be given for the entire county, instead of for individual areas. The percentage of the cultivated acreage that should be in other classes such as summer fallow or orchards, may be added in States where such data is significant.

(1) Permanent or semi-permanent practices:

- (a) Terracing;
- (b) Applying limestone;
- (c) Applying phosphates;
- (d) Strip-cropping;
- (e) Other practices of local importance (specify)

(2) Practices to be performed annually:

- (a) Growing winter cover or green manure crops which occupy the land only a portion of the year and are followed by a harvested crop;
- (b) Growing summer cover or green manure crops which occupy the land only a portion of the year and which are preceded or followed by a harvested crop;
- (c) Contour cultivation;
- (d) Other practices of local importance (specify)

(d) Percentage of pasture land on which specified practices should be conducted.

- (1) Reforesting
- (2) Fertilization (specify practices)
- (3) Reseeding
- (4) Brush removal
- (5) Other practices

(e) Percentage of woodland on which specified woodlot management practices should be conducted.

- (1) Fencing
- (2) Thinning
- (3) Other practices

2. For each area recommended for arable farming the committee should supply its opinion as to minimum sized family farm of the type or types adapted to the area, which will supply a fair family living to farmers of average ability, and still permit the farmer to follow conservational farming practices. The estimate should be expressed in acres, and numbers of each type of livestock for each predominant type of farm.

\* Describe desirable cropping systems for each area.

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\* This and other questions similarly marked may be set aside for another year's work if the State Council believes it desirable.



3. Many proposals have been suggested for the adjustment of the farm tenancy system so it will not impede various programs designed to improve American agriculture. In counties where tenancy is an important problem use the following check list to explain which of the adjustments the committee believes will aid in bringing about soil conservation, better rural housing, and a more desirable farm and rural life in the area. If there are no important differences between areas the items may be given for the county as a whole, instead of for individual areas.

- (a) Leases drawn for a long term of years,
- (b) Automatic continuation clauses in leases,
- (c) Six to eight months' notice of termination or renewal,
- (d) Compensation by landlord to tenant for termination of lease without good cause,
- (e) Compensation by landlord to tenant for improvements made by tenant and not exhausted at the time the tenant moves,
- (f) Compensation by tenant to landlord for any damage or deterioration to landlord's property.
- (g) Settlement of differences between landlord and tenant by arbitration,
- (h) Limitation of landlord's lien to the production of the farm during the current year,
- (i) Elimination of bonus or privilege rent,
- (j) Increasing the use of stock share leases,
- (k) Better crop share leases adapted to conservational rotations,
- (l) Combination crop share and livestock share leases,
- (m) Giving tenant option on farm in case of sale,
- (n) Encouragement of home ownership through Government aid to farm operators either by long-term credit at low interest or by the purchase of farms by Government for sale to tenants,
- (o) Discouraging the ownership of rented farms by absentee landlords through differential taxation or some other feasible means.
- (p) Control of speculation in land by taxes on profits made through the purchase and resale of farm property, and
- (q) For the Southern States, clarifying the position of the sharecropper by making all sharecroppers:

(1) Tenants, or (2) Farm Laborers.

State the reasons for believing that the measures checked will improve the condition of farming in the area. List any other

measures which you think would be appropriate in this regard.

4. For each area the committee should supply an explanation of any other kinds of recommended adjustment measures which apply to the farm organization. The inclusion of suggestions for alleviating or correcting land use problems described in Section II is particularly important.
- F. In those counties for which restoration land maps are prepared, the committee should supply an estimate of the total cultivated acreage in each area which they have designated as restoration land. They also should explain what criteria were used in selecting restoration land, and if possible indicate how this class of land can be identified in their particular locality. If crop yields were used as the basis they should indicate for specific crops, the yields which were adopted as the standards.

Other types of information and recommendations may be selected later as the result of the regional conference of project leaders.



## V. COORDINATION AND SUMMARIZATION OF COMMUNITY MAPS AND REPORTS.

### A. Integrating the Community Maps

The preceding phases of this project involve work which is to be conducted on a community basis. It will be necessary, therefore, to consolidate each of the community maps and reports into a map and accompanying report for the entire county. This will necessitate correlating the boundaries of land use areas between the several communities, and reconciling differences in the classification of adjoining areas. It also will require the compilation and organization of the materials and recommendations contained in each community report.

Several possible procedures might be followed in accomplishing desired integration of the work. The best results will be obtained if the project leader, with such technical assistance as he has available in the county, takes a rather active part in the preparatory work involved. He should handle the mechanical task of transferring the land use area boundary lines upon the county map and the renumbering of the areas, including the appropriate sections of each community report, so as to avoid duplication. Where the area boundaries and the classifications are in agreement across community boundaries he will color the areas accordingly. If, however, there are major discrepancies he should indicate the temporary boundaries so as to show existing discrepancies.

After this preparatory work has been completed the county committee, including representatives of each community committee, should meet to consider their county map and report. At this meeting decisions should be reached concerning corrections of boundary lines, classifications, and recommendations and information in the report.

The project leader also can be of great assistance in working up the county report in final form. In doing so he will wish to take particular care in making it conform to the conclusions of the committees.

### B. Summarizing the Recommendations

Although most of the information, conclusions, and recommendations resulting from this project will be related to specific areas in the county report, it is desirable to summarize some of the materials for the County as a whole. This is particularly true of the committee's recommendations on conservation goals made in answer to the questions listed on page 25, section IV, of this outline. These summaries should be set up in table form if possible. The attached tables (USDA-AAA Form No. 4) indicate the type of summary tables which would be most useful to the Department. These tables can be used to summarize the recommendations for individual areas within a county. They also are useful for compiling a State summary of information from individual counties. Other information may be summarized in the same fashion if desired.

Summary Sheet - County Planning Project, 1938-39, for Crop Farming Areas

State and County		Areas - Counties			Weighted
Items		"1"	"3"	"7"	County
					Average
Percentage of Present Cultivated Crop-					
land to be Continued in Cultivation					
Approximate number of acres of land in:					
the area to be continued in cultiva-					
tion					
Percentage of Recommended Cultivated					
Acreage to be in: 1/					1/
1. Intertilled Crops					
2. Small-grains and other close-					
grown crops					
3. Grass and Hay Crops					
Percentage of Recommended Cultivated					
Cropland Acreage Needing Soil-Con-					1/
serving Practices:					
1. Terracing					
2. Lime-phosphate application					
3. Strip-cropping					
4. Winter cover crop for green					
manure					
5. Summer cover crop for green					
manure					
6. Contour cultivation					
7. -----					
8. -----					
Approximate Acreage Recommended for					
Pasture					
Percentage of Recommended Pasture					
Acreage Needing Soil-Conserving					2/
Practices					
1. Lime-Phosphate application					
2. Reseeding					
3. -----					

1/ Average of percentages in these sections should be "weighted" according to the approximate acreage in each area recommended for cultivation.

2/ Average of the percentages in this section should be weighted according to the relative acreage in each area recommended for pasture. Minor Civil Division tabulations of census data will be helpful in building up these acreage figures for each area. These tabulations for 1935 census were transmitted to each State last year.

3/ Additional items such as commercial orchards or summer fallow may be added to the items listed here, in States where such data is significant.



Form No. 4

U. S. Department of Agriculture  
AAA, Division of Program Planning

Sheet No. \_\_\_\_\_  
of \_\_\_\_\_ Sheets

Summary Sheet-County Planning Project, 1938-39, For Range Areas

State and County		1/			
Items	Areas	Counties	Weighted Ave. and Totals 2/		
	"2"	"6"			
Normal Grazing Period-No. of Days					
Number of Acres Range Required per A.U:					
1. Normal					
2. Recommended					
Number of Acres of Range Land in the Area (approximate)					
Percentage Range that should be					
1. Deferred Grazed					
2. Contour furrowed					
3. Fenced					
4. -----					
5. -----					
6. -----					
7. -----					
Number Dams to be built					
Number Wells Needed					
Number Springs Needing Improvement					
Acreage Depleted Range and Restoration Land which Should be Artificially Reseeded					

1/ Identify areas by their number on the county map.

2/ Averages of the percentages should be weighted according to the approximate acreage of range land in each area.

### C. Final Form of County Map

The county map showing boundaries and classes of land use areas should contain an appropriate title and a legend descriptive of each class of area. It is suggested that the following title be used:

Land Use Classification of \_\_\_\_\_ County, \_\_\_\_\_, 1938  
State

The map should contain a statement to the effect that the work was done by the County Agricultural Planning Committees. The names of the members of the committees may be listed if it is so desired.

The legend should contain an exact statement of each class of area, and subarea if used, and should indicate that the area numbers on the map are used for identification purposes in the report.

### D. Arrangement of the County Reports

It is desired that the county reports be so arranged that they can be easily used for reference purposes in connection with the land use classification map. Accordingly it is suggested that the report be organized so as to include all of the items of information and the recommendations concerning a particular area in one section of the report. Furthermore, the order of items for a given area should follow the order in which they are included in this work outline. If this plan is followed the report will follow the general arrangement outlined below.

#### Table of Contents

Explanatory information concerning the project, if desired.

(This section would serve to aid in understanding and interpreting the work)

#### Information Pertaining to Each Land Use Area

##### Area Number 1

Description of main features and characteristics of Area 1  
(Include physical features, present land use, and the special types of a descriptive or explanatory information requested, See Pages 13 and 14.)

Explanation of land use problems in Area 1.

Answers to questions concerning the classification.

Recommendations and suggestions pertaining to adjustments in land use and conservation goals.

Any other information on this area which the committee wishes to include.

##### Area Number 2

(The arrangement of information on Area 2 and succeeding areas will be similar to that followed in Area 1.)

#### County Summary

The county summary should include the tables on conservation goals and any other information which the committee or the project leader wishes to summarize on a county basis.



## VI. MAKING THE RESULTS OF THE LAND CLASSIFICATION WORK AVAILABLE FOR USE.

One of the important objectives of this project is to secure selected types of information and recommendations from local farmers which can be used in connection with various public programs. Another equally important aim is to increase local knowledge, crystallize opinions, and promote local interest and participation in the various programs which affect land use. This can be accomplished only if the results of the work are made available in appropriate form to the agencies and to the people. One of the prerequisites of continued interest on the part of the people is tangible evidence of results and progress in their land use planning efforts.

It will be impossible to supply each interested agency with copies of the map and report unless they are reproduced in large quantities. Decisions concerning the reproduction and distribution of parts of the land use mapping and classification work rests with the States. If NYA or WPA clerical assistance is available to the project leader, it will be desirable to reproduce up to 10 or 12 copies of the county map in colors and an equal number of copies of each county report. If such assistance is not available sufficient copies of materials for each county should be prepared to provide one copy to each of the following agencies at least: The U. S. Department of Agriculture, the State Advisory Council, the County Agent, and the College of Agriculture.

The State Advisory Council has the responsibility for releasing the county maps and reports and for transmitting the copies to the agencies concerned. They will include such comments as are desired concerning the accuracy of the work, the interpretation of results and the use of the materials. However, under no circumstances should the county committees' work be revised without resubmitting the proposed revision to it for approval.

The Department's copy of the county maps and reports should be transmitted as rapidly as they are completed and approved by the State Advisory Committee. Do not wait until the year's program is completed for all counties where land classification work was initiated. Send in the county maps and reports as soon as they are available.

From study of this work outline it is evident that the land use mapping and classification work represents a very important first step in county agricultural planning, and that it requires considerable work on the part of the committees, the project leaders, planning technicians, and others associated in an administrative or advisory capacity. Of particular importance to the success of the project is the guidance and assistance given the committees, and their attitude toward the project. Care must be taken to avoid biased results through over activity by technicians interested in particular lines or by presumptive leadership in the discussions. What is desired most in county agricultural planning is the carefully formulated opinions of the people themselves, based upon such factual information as will aid them in understanding their land use problems and the various measures which may be used in their solution. Furthermore, it is as equally important to have local expressions of desirable conditions, as it is to know which are undesirable. The future course of county agricultural planning hinges largely upon the success of this project. The Department and States are anxious to see it succeed.





United States Department of Agriculture  
Extension Service  
Division of Cooperative Extension

Library, U. S. Department of Agriculture  
WASHINGTON

SUMMARY OF PROPOSALS FOR

COUNTY AGRICULTURAL LAND-USE PLANNING IN 1938-39

Prepared by representatives of the agencies  
in the Department of Agriculture concerned  
with land-use planning)

The United States Department of Agriculture and the States are carrying out a number of public programs designed to aid in accomplishing a more permanent, balanced agriculture and better conditions of rural land use. Although these several programs have the same ultimate objectives, they use a variety of measures, devices, and procedures for attaining the desired goals. As various measures are applied to a given locality, they in one way or another have a marked effect upon land use and the people dependent upon the land.

To assure that each of the public programs will make the greatest possible contribution toward better conditions of land use and a financially sound agricultural economy, it is necessary that they be harmonized and applied in the field so as to fit the particular needs, conditions, and problems of the State and local areas. It is necessary also that the people in the areas affected are in agreement on what constitutes better land use and sound adjustment programs for their localities.

To bring about changes in land use needed for soil conservation, flood control, and other public purposes, and at the same time to promote economic farm organization and management, it is necessary to know rather specifically in which areas particular changes are needed. Otherwise, there is a real chance that the adjustments made in the interests of one program will be applied with too little reference to the immediate and long-time effects upon farm income and may throw existing systems of farming farther out of balance. Furthermore, it is not enough that certain individuals in the Department of Agriculture, the State Colleges, or on the farms know what types of land use or systems of farming are appropriate for particular local areas. This knowledge should be organized and made available to the administrators of the public programs and to present and prospective users of land resources.

More attention needs to be given to the probable best use of land in the future if the mistakes of individuals establishing themselves in areas unsuited to agriculture are to be avoided; if the educational and action programs are to be adapted to the conditions that exist in the different areas; if proper guidance is to be given to the development of public services such as roads, electric lines, schools, and so forth; and if our lands unsuited to agriculture are to be so handled as to result in their best use from the standpoint of the general welfare.





The Department of Agriculture and the States have been giving considerable attention to the task of working out an effective land-use planning procedure, which would help local people to adjust themselves and their farming operations to the use capabilities of the land and to economic conditions, and at the same time enable public agencies to assist farmers to attain these goals. As a result, the Department of Agriculture has formulated its recommendations concerning the land use planning project for 1938-39, centered around the following basic purpose:

THE BASIC PURPOSE OF LAND-USE PLANNING AS THE DEPARTMENT CONCEIVES IT, IS THE ESTABLISHMENT BY AREAS OF LAND-USE OBJECTIVES TO GUIDE THE LOCALIZATION AND CORRELATION OF THE PUBLIC PROGRAMS. THREE STAGES OF DEVELOPMENT MAY BE INVOLVED IN ANY STATE, I.E.

1. Specific land-use mapping and recommendations for land-use adjustments in as many selected counties as possible for 1938-39.
2. Beginning work or further developing existing work in other counties in preparation for the determination of definite land-use objectives and recommendations another year.
3. Experimental counties for developing special types of planning and adaptation of programs.

LAND-USE MAPPING, CLASSIFICATION AND RECOMMENDATIONS  
FOR LAND-USE ADJUSTMENTS

Establishing Land-Use Classes

Land-use mapping and classification should involve mapping the various areas or sections in a county in terms of agricultural characteristics, and the types of agriculture or other economic uses to which these areas seem best adapted. The classifications outlined last year should be considered in making plans for land-use mapping and classification. In general these classifications are -

1. Areas not in farms at present divided with reference to:
  - a. Areas which should not be developed into farms.
  - b. Areas which may be suitable for development into farms.
2. Areas which now contain farms divided with reference to:
  - a. Areas not fit for farming and which should be put to some other use.
  - b. Areas suitable for farming but in which important changes in types or sizes of farms are desirable.
  - c. Areas in which little adjustment is needed.





The mapping should be done in accordance with certain standard criteria so that the results will be sufficiently uniform to meet the needs of the various national programs. (These criteria are given in detail in "A Work Outline Covering the Land-Use Mapping and Classification Project Recommended for Land-Use Planning Committees," which will be available soon.)

#### Determining the Major Adjustments in Each Area

An analysis of the problems of each mapped area should be made in order to determine the most desirable adjustments. The adjustments might consist of changes in the major uses of land as well as in systems of farming.

Recommended adjustments should be stated in terms of ultimate goals as well as desirable shifts or changes in land use and farming practices. The recommendations should include:

- (a) The percentage of the cropland now cultivated which should continue to be cultivated under a satisfactory soil-conservation and land-use program.
- (b) Percentage of the cultivated acreage that should be in
  1. Intertilled crops.
  2. Small grains and other close-sown commercial crops.
  3. Grasses, legumes, and hay crops, unless included under (1) or (2).
- (c) Percentage of the cultivated acreage on which specified soil-conserving practices should be conducted.
- (d) Percentage of pasture land on which specified pasture improvement practices should be conducted.
- (e) Grazing capacity of range land and the extent and type of range improvement practices needed.
- (f) What uses are recommended for areas not suited for arable farming, viz:
  - a. Areas now in farms.
  - b. Areas not in farms.
- (g) What types of farming are recommended for the areas suited for farming which are not now farmed.

#### Developing Recommendations and Policies To Attain the Adjustments

The recommended adjustments should be developed with the help of the judgment of the community and county land-use planning committees with respect to the effectiveness of the various national programs and possible desirable changes in such programs.





### SPECIAL PLANNING ACTIVITIES

The Agricultural Adjustment Administration wishes to continue the "Experimental County" procedure used in a number of counties last year. The Bureau of Chemistry and Soils would like to work with County Committee in counties where soil surveys are being made to develop more accurate productivity ratings for the various soil types. The Forest Service would like to carry the planning further in a few counties to develop better integration of use of forest areas with those of privately owned agricultural land. Likewise, other agencies of the Department may desire to undertake special planning activities in a few counties.

The initiative for establishing this special type of planning work rests with the representatives of the interested agencies.

### REPORTING THE FINDINGS AND RECOMMENDATIONS

A system of reporting and clearing the work will be developed in cooperation with the States. Included will be:

- (a) The county maps.
- (b) Statements of needed adjustments by areas and counties.
- (c) The recommendations, policies, and programs for carrying out the adjustments.
- (d) The more general statements of conditions and problems by areas which have not been classified and mapped.

